THE CITY OF SAN DIEGO

MANAGER'S REPORT

DATE ISSUED: March 29, 2001 REPORT NO. 01-062

ATTENTION: Rules, Finance and Intergovernmental Relations Committee
Agenda of April 4, 2001

SUBJECT: Energy Conservation and Management Status Report #2

REFERENCE: Manager's Report No. 01-032, dated February 20, 2001

SUMMARY

Issue - What actions should the City take in response to the energy emergency currently impacting San Diego?

Manager's Recommendations - Adopt a broad array of actions to address the energy emergency at the state and local level including: 1) Establish a baseline inventory of the City's electricity and natural gas use and establish priorities for energy efficiency upgrades to reduce energy usage at City facilities. 2) Support new clean energy generating projects in San Diego that enhance regional energy sufficiency and are environmentally sound. 3) Request the Governor issue an Executive Order directing the Independent System Operator to provide maximum notification of forced system outages to better protect public safety. 4) Convene an advisory committee of major commercial energy users to identify options to improve energy reliability and evaluate options to reduce the impact of unscheduled power outages on San Diego businesses and residents. 5) Participate with the County of San Diego in evaluating the feasibility of establishing a county-wide independent municipal utility district and in seeking legislation to streamline the process for establishing such an entity. 6) Establish an Energy Star Purchasing Program requiring all applicable classes of products using electrical energy to be Energy Star compliance as a minimum criteria for purchase. 7) Direct the City Manager to review and update all Council Policies related to energy use and to amend Council Policy 900-14 to require all new City facilities be designed to exceed Title 24 energy efficiency standards by a minimum of 25%. 8) Approve the legislative recommendations proposed by the Intergovernmental Relations Department. 9) Direct the City Manager to have the Chief of Police and the Energy Conservation and Management Administrator coordinate implementation of Executive Order D-26-01 requiring retailers to reduce unnecessary outdoor lighting wattage levels during the energy emergency using education and voluntary compliance as the primary implementation tools. 10) Direct the City Manager to implement a public outreach and education program to raise awareness of energy issues by the public and City employees.

Other Recommendations - None.

Fiscal Impact - None with these actions. Any projects or policies with fiscal impacts beyond current budget levels will be individually docketed for Council consideration.

BACKGROUND

At the February 21, 2001 Rules Committee meeting, a staff report was provided on the status of City energy conservation efforts including an overview of the current energy situation facing San Diego, and specific information on existing City energy-related activities. The Committee directed the Environmental Services Department to provide monthly status reports regarding the City's response to the energy emergency. This report responds to those directions and specific questions raised at subsequent Rules Committee meetings.

DISCUSSION

The City is facing serious challenges regarding energy consumption, efficiency, reliability and related economic impacts. Since the last report, the City has experienced its first "rolling blackouts" since World War II. All indications are that this is a precursor of more severe energy shortages which are likely to occur this summer. Projections by the California Energy Commission indicate that California will face energy supply shortages of almost 5,000 megawatts during peak summer usage periods as shown by the following table.

SUMMER POWER FORECAST

	Megawatts
Estimated Summer Demand	61,125
Existing Electricity Resources	
• Existing Power Plants	45,025
• Out-of-State Imports	4,834
• Los Angeles Resources	8,198
• Imperial Irrigation District	875
• Eastern Sierra Resources	277
Total Existing Power Sources	59,209
Expected Plant Breakdowns	3,050
Projected Electricity Availability	56,159
Total Projected Electricity Shortfall	4,966

Source: California Energy Commission

Additionally, projections developed by the County of San Diego indicates, that while the San Diego region generates sufficient energy locally to meet winter needs, significant amounts of imported energy from within California or out-of-state will be needed to meet peak summer energy demands.

An interim Energy Conservation and Management Plan is under development and will serve as a more comprehensive blueprint for the actions necessary to address the City's current and future energy situation. This report outlines immediate and short-term (three to twelve months) actions, as well as several mid-term (one to three years) and long-term (beyond three years) measures the City could pursue. A Glossary of energy related terms used in this report and subsequent status reports is included as Attachment 1.

A. Public Safety during Rolling Blackouts

San Diego has experienced two unscheduled service interruptions, commonly known as rolling blackouts, within the last month and can expect more from May - September based on energy supply-demand projections prepared by the California Energy Commission. Questions have arisen about the public safety during these blackouts and the City's response to them. It is recommended that the City adopt a Resolution requesting the Governor to issue an Executive Order directing the Independent System Operator (ISO) to provide maximum notification of forced system outages to better protect public safety. The following is information on existing exemptions for facilities and circuits from rolling blackouts by SDG&E, as well as the City's notification procedures and response once a rolling blackout occurs.

1. Criteria for Exemption

Specified classes of SDG&E customers are exempt from inclusion in rolling blackout electricity curtailment areas due to public safety issues. These are designated in the Public Resources Code and include all Fire and Police stations without back-up generators; 911 dispatch centers; designated County and City Emergency Operations Centers; San Diego/Mexico border services; Lindbergh Field and Harbor facilities; large (100 kW) water and sewer treatment facilities; hospitals with more than 100 beds; major network stations (Channels 6, 8, 10, 7/39, 51); emergency broadcasting network transmitters; communication and electric utility facilities; military facilities required for national security; and other facilities with public safety concerns.

2. Notification Procedures

The notification process for rolling blackouts consists of three steps. The first is from the Independent System Operator (ISO) to SDG&E. While as much lead time as possible is desirable, in fact notification from the ISO can be as short as 5-10 minutes or less until the utility must curtail a specified amount of electrical energy demand. The second step is from SDG&E to key contacts/customers in areas to be impacted by the rolling blackout. The third step is internal notification by the impacted customers or contacts. For the City, SDG&E notifies the County Office of Disaster Preparedness of an imminent power outage and the County contacts the City Emergency Management Section of the Central Operations Division of Fire and Life Safety Services, which then begins the City's internal notification process which is described in Attachment 2.

As soon as notification is received from the ISO, SDG&E begins an automated dialing service, supplemented with phone operators, to reach the priority listing of general categories shown in Attachment 3. Based on lessons learned from the first two blackout days, SDG&E is setting up a "blast" e-mail which will go out simultaneously to all customers on their address list. Customers desiring to receive this notice can submit their e-mail address to SDG&E.

3. Formation of a San Diego Reliability Council

The Chamber of Commerce has proposed the formation of a San Diego Reliability Council which would provide a means for SDG&E and the largest commercial users of electricity to work together to reduce the negative impacts of unscheduled electrical outages on the San Diego economy. Based on a model developed by the Silicon Valley Manufacturing Group, this Reliability Council would consist of major commercial energy users and could provide an important forum to help increase communication and coordination between SDG&E and San Diego's commercial sector.

Short-term Objectives:

- Evaluate model and contact stakeholders.
- Present findings and associated recommendations to Rules Committee in Spring 2001.

B. City Conservation Efforts

While the current energy crisis is considered as having started in May 2000, the City had already initiated a wide range of energy conservation and efficiency projects as shown in Attachment 4. In, FY 1998, City electricity consumption was 284 million kWh while, by comparison, in FY 2000, City electricity consumption was 212 million kWh or almost a 25% reduction.

In order to consolidate information pertaining to existing conservation measures in place at City facilities and to identify further actions that have the potential to positively impact City energy conservation, ESD hosted a Best Practices Concept Exchange on February 23, 2001. Key employees from almost all departments attended the workshop and brought a broad range of knowledge and experience regarding energy generation, conservation, financing, incentives, billing and other specific issues. The information gathered at this workshop will be incorporated into the Interim Energy Conservation and Management Plan. Attachment 5 summarizes some of the conservation efforts recently implemented by City departments.

It is recommended that the City set an interim goal of further reducing energy consumption by 7- 10% in FY 2002 using the following steps as part of a strategy to achieve this goal. After the Baseline Inventory of City energy consumption is completed and opportunities for further energy use reductions quantified, a firm goal should be adopted.

1. Establish Baseline Inventory of City's Energy Consumption

Establishing a detailed baseline inventory of the City's energy consumption (electricity and natural gas) is the foundation which all progress towards energy conservation and efficiency can be measured against. The Interim Energy Conservation and Management Plan (Plan) will include this baseline inventory of the City's energy consumption, as well as specific indicators that will allow progress to be measured. It is recommended that this data inventory include, a) historical data on energy consumption by facility; b) identification of the largest energy using facilities; c) a trend analysis of energy consumption by user type; d) an evaluation of existing City building design for compliance with Title 24 energy efficiency standards, as well as qualification for Energy Star rating e) review of specific facility energy plans and updates of energy audits; f) an evaluation of existing City lease agreements and contracts for energy impacts; g) identification and analysis of City emergency generation capacity; h) a review of SDG&E billing data and coordination of electronic data transfer; i) mapping of meter locations to better facilitate tracking and potential for consolidation; j) research of real-time metering and/or interval energy consumption data options; and k) an inventory of

high energy efficiency new construction projects designed in accordance with Council's Green Building policy.

Attachment 6 shows the average annual energy consumption by the major types of energy users in the City, e.g. wastewater pumping and processing, water pumping and processing, street lights and traffic signals, downtown office buildings, Qualcomm Stadium and all other facilities.

In addition, the Plan will address immediate and short-term measures which can be undertaken to reduce energy consumption during upcoming peak summer months, as well as strategies for handling energy emergencies during that time. Priorities will also be established for energy efficiency upgrades in City facilities. The discussion will include mid and long-term objectives in order to provide a basis for developing a Strategic Energy Conservation and Management Plan.

The Strategic Plan will be developed with extensive employee and public input and will guide the City's energy conservation activities over the next five years.

Short-term Objectives:
- Complete the Interim Plan and present at the Rules Committee meeting of May 23, 2001.
- Develop a Strategic Plan, with employee and community input, that will guide the City's energy conservation, energy self-reliance and other activities for the next five years.
- Present the Strategic Plan and goals to the Rules Committee in Fall 2001.

Mid-term and Long-term Objectives:
- Measure and report on progress against baseline indicators developed in the Plan.
- Modify or revise the Plan as necessary to reflect changing energy conditions, availability of new technologies or funding mechanisms, or changes to previous assumptions.
- Provide regular updates to the Rules Committee, City Council, business community and the public regarding revisions to the Plan and current accomplishments.

2. Establish an Energy Conservation & Management Division

As conceptually approved by Council, a centralized Energy Conservation and Management Division is being formed within the Environmental Services Department for inclusion in the FY2002 budget. The program will seek to make San Diego a model city in energy conservation and energy self reliance through the use of renewable energy.

Short-term Objectives:
- Submit division structure and budget as part of the proposed FY 2002 budget.
- Recruit and hire an Energy Conservation and Management Administrator, with an appointment expected in mid-May 2001.
- Hire permanent staff for the division by early May.
- Assume duties of implementation of short-term objectives outlined in the Interim Plan.
- Address the mid- to long-term energy conservation, generation, financing and funding options available to the City.

Mid-term and Long-term Objectives:
- Accomplish measurable goals and objectives as outlined in the Plan.
- Track indicators of progress and provide routine Council updates.
- Continue to coordinate with all City Departments.

3. Review and Update Council Policies and Administrative Regulations Relating to Energy Use

Several Council Policies and Administrative Regulations have been identified which require review and revision to address the current situation and the City's commitment to address the energy crisis.

Short-term Objectives:
- Amend Council Policy 900-14 Green Building (November 1997) to require that all new City facilities be designed to exceed current Title 24 energy efficiency standards by 25%.
- Review and update Council Policy 900-02 Energy Conservation (April 1976); and Administrative Regulation 55.90 Request for Gas And Electric Service for City-Owned Facilities (December 1983).
- Provide more detailed recommendations in subsequent reports.

Mid-term and Long-term Objective:
- As needed, draft additional policies for review and adoption that could further enhance the City's energy conservation and efficiency efforts.
- Review the Energy 2000 Task Force Report (December 1980) for possible revisions.

4. Adopt an Energy Star Purchasing Program

City departments purchase a wide variety of electrical equipment and appliances each year. It is recommended that ESD partner with Purchasing Division to investigate the establishment of an Energy Star Purchasing Program that would require specifications for all applicable classes of products using electrical energy to include Energy Star compliance as a minimum criteria for purchase.

Short-term Objectives:
- Coordinate with Purchasing to review and quantify existing electrical purchases and determine cost/benefit analysis.
- Provide analysis, recommendations and implementation timeline in a subsequent report.

Mid-term and Long-term Objectives:
- Track qualified purchases for compliance and determine avoided cost savings.
- Modify or revise program as new products are added or removed.

C. Impact of the Energy Crisis on City Residents, Businesses and City Operations

1. Existing Conservation Efforts by San Diego Businesses

Many San Diego businesses have already made major contributions towards establishing energy conservation and efficiency measures. Twenty-two local companies have partnered with the US EPA and Department of Energy's Energy Star program in the San Diego Climate Wise program. Climate Wise, administered by the ESD, is part of the City's outreach to help local businesses complete, measure, and be recognized for their efforts to reduce greenhouse gases through energy efficiency, reductions in fuel consumption, and recycling programs.

Implementation of the 15 San Diego Climate Wise Action Plans completed to date is projected to save approximately 22 million kWh of electricity annually. Attachment 7 provides a summary of the accomplishments of five companies participating in the project. In addition, Climate Wise Partners were formally recognized by the City Council for their energy saving efforts when Council adopted a resolution proclaiming April 2, 2001 as "San Diego Climate Wise Partners Day."

2. Identify Incentives to Encourage Energy Conservation in New Private Development

As a means to identify incentives that will successfully increase the use of materials and designs that conserve energy in new developments, a national search is in process for model programs that have accomplished this objective. Written information about these programs is being collected, and the applicability to San Diego is being evaluated. In addition, City staff is meeting with other local leaders, such as the Regional Energy Office, to explore ways to leverage resources and enhance the outcome of those projects that serve mutually shared goals. A detailed proposal on incentive options will be submitted to the Rules Committee on June 20, 2001.

3. Impact on Maintenance Assessment Districts

At the February 21, 2001 Rules Committee, a report was requested on how Maintenance Assessment Districts (MADs)were being affected by increased energy costs. Increased energy costs are having a significant adverse budget impact on nine of the fourteen of the MADs administered by the Park and Recreation Department and are expected to cumulatively exceed budgeted levels by almost $400,000 as shown in the following table.

MAINTENANCE ASSESSMENT DISTRICT
FY 2001 PROJECTED ENERGY COSTS

District Name	FY01 Budget	FY01 Est. Cost	(Shortfall)/Surplus
Street Lighting #1	$154,779	$276,092	($121,313)
Scripps Ranch	0	3814	(3814)
Campus Point	125	187	(62)
Sabre Springs	2,300	1,589	711
Mira Mesa	$20,000	$24,625	($4,625)
Rancho Penasquitos	1,000	1,335	(335)
Calle Cristobal	350	233	117
Mid-City	43,520	49,252	(5,732)
Newport Avenue	175	4,024	(3,849)
North Park	11,500	32,869	(21,369)
Stonecrest Village	1,800	1,096	704
Talmadge	21,945	9,237	12,708
Little Italy	18,693	18,249	444
Downtown PID	199,000	396,838	(197,838)
Totals	475,187	819,438	(344,251)

These heavy impacts are reported as due to lighting being billed at non-cap energy rates. For FY02, increased assessments in districts are limited to specific CPI formulas and can not be increased to cover energy costs in excess of that formula.

4. Executive Order D19-01 Requiring Business to Reduce Lighting

On February 1, 2001, Governor Davis issued Executive Order D-19-01 requiring retail businesses to substantially reduce unnecessary outdoor lighting during non-business hours. This order is primarily aimed at shopping centers, auto malls and dealerships. The Executive Order became mandatory for retail establishments on March 15, 2001 and compliance with the Order is the responsibility of the individual business owner. As written, the Order anticipates that law enforcement agencies will take the lead on implementation and enforcement of the Order.

Energy Program staff is working with the Police Department to investigate ways to implement this Order without impacting the department's public safety responsibilities. Launching a broad educational outreach effort to San Diego's retail establishments may be the first step in trying to achieve voluntary compliance. Beat officers on routine night patrol will report the names and addresses of businesses with apparently excessive lighting levels during non-business hours to Energy Program staff who will contact them during regular business hours. Additionally, upon request the Police Department will consult with businesses on appropriate lighting levels for safety and security of their property. Under the Order, the focus of local efforts are to be through education and outreach with enforcement used in only the most egregious cases.

Short-term Objectives:

- Partner with Police Department, Neighborhood Code Compliance, the Chamber of Commerce and other local stakeholders to fully understand the many dimensions of the order and develop recommendations for implementation.
- Develop a MOU between the Police Department and Environmental Services Department defining roles and procedures implementing the Order.
- Strive for pilot implementation by May 2001.

D. Public Outreach

Plans are being developed for a comprehensive city-wide outreach effort incorporate work in several areas, which are summarized below, to increase awareness of energy issues by the public and City employees. Community and corporate partners will be sought out in order to maximize many efforts already underway.

Energy Hotlines

An e-mail hotline (energy@sdcity.sannet.gov) has been established so that City employees, residents and businesses can provide input, voice concerns and make suggestions about energy issues. City employees can directly access the e-mail hotline on Groupwise by addressing their mail to "energy." In addition, a voice-mail hotline is now accessible by calling 858-492-6000.

These hotline options will be widely disseminated and advertised through the many vehicles already available for city communication along with many of the opportunities discussed below.

ESD staff will review all incoming messages for these hotline sources and forward the information to the appropriate party. Depending on the volume of input received, personalized responses may be limited, but all comments will be collected and forwarded as appropriate. In addition, ESD will maintain a database tabulating volume and content for inclusion in future reports.

Water Bill Insert

An informational brochure is under development and is anticipated for mailing to approximately 260,000 households beginning in May 2001.

Video Series and Public Service Announcements

Preliminary concepts include production of a five-part series to air on City cable access to further the public knowledge about San Diego's situation and help equip our citizenry to deal with projected future challenges. In order to develop the initial concepts, calls from the public to date were analyzed and the most common themes were used to outline the series. These include: 1. What is deregulation and why has it turned our lights off? 2. What will the summer hold? What is a rolling blackout, what can I expect when one occurs and how are my municipal services prepared to respond? 3. Where can I find a comprehensive list of ways to conserve and why should I ? 4. Are we building more generation plants? What will this do the environment? What is a Municipal Utility District and will it help? 5. What are other cities doing?

Because of the wide availability of public education materials, the City will be exploring potential partnerships to achieve production of the video series and Public Service Announcements.

WebSite

It is frequently suggested that an Energy section be added to the City of San Diego's Web Page. This idea is being further investigated and preliminary concepts are being developed..

Elementary Education

All future ESD educational efforts will incorporate an Energy module. These efforts currently include a contract with I Love a Clean San Diego which visits 285 classrooms and 15,000 children annually; EnviroFair during Earth Week anticipated to include 500 children this year; and EarthCamp which runs from April 30 through May 31 and has close to 400 children scheduled this year. Results and learning achievements will be presented in later reports.

Public Workshop Series

A six-part workshop series is being planned with the first event anticipated in early May. The series will be modeled after the already successful "Dashboard Series" which included a series of community forums attended by over 600 citizens. This effort resulted in San Diego's nationally recognized Community Sustainability Indicators which have provided important information about the way San Diegans view their quality of life.

Earth Fair

San Diego's annual Earth Fair event is scheduled in Balboa Park on April 22, 2001. A special Energy section and educational materials are under development.

Public Outreach Short-term Objectives:

- Launch full operation of energy hotlines by April 4, 2001.
- Incorporate Energy Conservation module into all Elementary Education outreach by April 16, 2001.
- Secure speakers and publicize Public Workshop Series by end of April 2001.
- Develop specialized Energy display and include in Balboa Park Earth Fair by April 22, 2001.
- Identify partners and begin production of an informational video series by May 2001.

- Implement Web Page addition by May 2001.
- Begin mailing of Water Bill inserts in May 2001.

E. Establishment of a Municipal Utility District

The County of San Diego has initiated actions which could lead to the formation of a county-wide Municipal Utility District (MUD) to deal with energy issues and establish greater energy self-reliance for the members of the MUD. The county-wide district would be an independent entity authorized to establish its own by-laws and rules of administration. The proposed governing board would consist of nine members, two members of the Board of Supervisors, two Council members from the City of San Diego, three council members from other cities and two members with utility expertise from the public at large. Cities would have the option of not joining if they so desired. Since counties are not currently authorized to form MUDs, the formation of the MUD in a timely manner depends on the state approving legislation proposed to be sponsored by Senator Alpert. Once the legislation becomes law, the next step in the formation of a MUD would be the initiation of the Local Agency Formation Commission (LAFCO) process. Initially, the focus of the MUD would be to develop energy reliability for its member agencies by acquiring generation capacity or contracting for long-term energy supplies which would be distributed through SDG&E's existing distribution system. It is recommended that the City participate as a full partner with the County of San Diego in reviewing this option.

Short-term Objectives:
- Establish a Task Force, in conjunction with Intergovernmental Relations (IRD) and the City Attorney's office to review the legalities, risks and opportunities regarding this option in greater detail.
- Formulate, recommend and support necessary legislation.

Mid-term and Long-term Objective:
- Continue to work closely with the key agencies on researching and developing this concept.

F. Energy Generating Projects in San Diego

In support of the Mayor's goal to pursue energy independence, it is recommended that the City support clean energy generating projects that will enhance regional energy sufficiency and that are environmentally sound. According to the California Energy Commission's database, there are 69 power plants in San Diego County with a total rated energy generation capacity in excess of 4,610 megawatts. Of these plants, 13 are larger than 20 megawatts and have a combined rated capacity of 4,446 megawatts.

1. Proposed Energy Generating Projects

Two new energy generation projects are currently in the California Energy Commission permitting process and have already been passed its siting committee. Both facilities will be located in the Otay Mesa area of the City and part of the County near the intersection of Otay Mesa Road and Harvest Road. This location is proposed because of proximity to a major natural gas line, cooling water and an SDG&E substation. The two projects are the Larkspur Energy Facility Emergency Peaker Project and the Otay Mesa Power Plant Project. The Larkspur peaker plant, proposed by Wildflower Energy LLP / InterGen would generate 90 MW of electricity using two dual-fueled GE LM6000 Enhanced Sprint gas turbine engine-generators equipped with state-of-the-art air pollution control features in a simple-cycle mode. According to the Air Pollution Control District, this facility will be in full compliance with its regulations and will meet California Air Resources Board Best Available Control Technology (BACT) requirements. This facility is being reviewed under the 21 day permitting process in Executive Order D-26-01. The final date

scheduled for approval of the project is April 4, 2001, and the peaker plant is scheduled to be on-line in June 2001 in time to help with the projected summer energy supply shortfall.

The Otay Mesa Generating Project will be located in the unincorporated portion of Otay Mesa and will produce 510 MW using a natural gas-fired combined cycle plant with dry cooling technology. The plant proposed by the Otay Mesa Generating Company, a subsidiary of PG&E Generating, is scheduled to start operation by summer 2002. According to the Energy Commission Siting Committee, the $350 million project is entitled to certification not only under local ordinances and regulations but also under the Warren-Alquist Act and the California Environmental Quality Act (CEQA) based on evidence presented at formal hearings.

The plant will use Best Available Control Technology (BACT) to reduce air emissions to insignificant levels. The project proponent is also using mobile emission reduction credits from replacing old diesel engines in harbor vehicles with new less polluting engines and substituting natural gas engines for diesel engines in Waste Management, Inc. refuse collection vehicles.

In addition to these projects, there are other new power plants or expansions of existing plants being proposed in other parts of San Diego County. There are two other plants in the permitting process in the South Bay, one is a 44 MW peaker plant in Chula Vista that is expected to be expanded to 100 MW and a Cal Peak Energy 49 MW peaker plant proposed for the intersection at the intersection of Lone Star Road and Harvest Road on Otay Mesa, approximately one mile north of the Larkspur project.

2. City Power Plant Siting Regulations and Oversight

"Energy Generation and Distribution Facilities" are listed in all base zones as a land use regulated within the City of San Diego by the Land Development Code (LDC, Municipal Code Chapters 11-15). The City's authority to review and approve power plants, therefore, is contained in the code. The LDC does not differentiate or regulate energy generation plants based on facility size or generation type.

Currently, nine citywide zones and a zone within the Otay Mesa Planned District Ordinance, Otay Mesa Design District, allow these facilities through a ministerial permit process (Process 1 decision). This allows energy plants to be approved by City staff, provided the proposed plant meets zone requirements for setbacks, height, etc. and all other applicable LDC development regulations.

Energy generation and distribution facilities may also be approved through a conditional use permit (CUP) in twenty-six other citywide zones, except for some limitations in the coastal zone. A CUP is processed by the City through a discretionary permit process (Process 3 decision). A Hearing Officer would make the initial decision on the CUP with the ability for appeal of that decision to the Planning Commission. The CUP decision process would subject the project to the Environmental Quality Act (CEQA), as well as conditions the decision maker deems necessary to eliminate land use impacts on surrounding properties. In all other zones, these facilities are not permitted by the LDC.

In addition to base zone and conditional use permit regulations, a new electric generation facility would be subject to all other regulations applicable to development citywide. These include regulations addressing environmentally sensitive lands (steep slopes, biological resources, multiple habitat preservation plan, etc.); historical resources (historic structures, archaeology, and paleontology); general development issues (grading, landscaping, parking, signage, etc.); subdivision of land (maps, easements, etc.); and

building development (building codes).

The City is further evaluating recent state and federal legislation and Executive Orders issued by the Governor relating to the energy crisis to determine whether local government has been pre-empted in its land-use authority to regulate certain energy generating projects.

3. Renewable Resource Projects

City staff is continuing to pursue additional renewable resource energy generation projects to increase the City's energy self reliance. Currently, the City's Metropolitan Waste Water Department has three renewable resource energy generation facilities, Point Loma Waste Water Treatment Facility Cogeneration Plant, North City Water Reclamation Plant Cogeneration Plant and the Metro Biosolids Center Cogeneration Plant, generating a total of 15.17 megawatts of energy. Two of these facilities are powered by landfill gas from the Environmental Services Department operated Miramar Landfill. By summer, a 1.8 megawatt hydro-electric generation facility will be installed at Point Loma increasing the City's self generated electrical energy to just under 17 megawatts.

The US Department of Energy has just completed a feasibility study for the Environmental Services Department on the feasibility of placing solar power plants on closed landfill sites. The study focused on placing solar power stations (photovoltaic (PV) panels connected in arrays to generate electricity) for the purposes of power generation and electricity reliability. Such PV power generating facilities are most effective at producing electricity when San Diego needs it most - on hot sunny summer days when energy demand is at a peak. These facilities can be installed quickly (six to eight months) and are environmentally benign with no emissions.

The feasibility study projects such projects can compete with 16 cents per kilowatt-hour energy prices, which is less than the current average cost for electricity at most City facilities. The three sites being considered for projects of either 500 kilowatts or 1000 kilowatts (1 megawatt) are the South Miramar Landfill, the South Chollas Landfill and the Arizona Landfill. Since the study indicates the projects are both economically and technically feasible, the Environmental Services Department is evaluating the full range of site specific issues for each of the candidate sites and will be bringing projects forward for consideration later this year.

Additionally, the Environmental Services Department is in the design stage for adding a 38 kilowatt PV system to power the administration building at its new Miramar Place Operations Station. Funding for this project is docketed for Council consideration on April 3, 2001, and if approved, the project will be operational in summer 2001.

G. Legislative Review and Advocacy

Following is a summary of important energy-related legislation currently under consideration by the State Legislature:

SBX 5 Sher Public Utilities

This bill has emerged as the main vehicle to enact major energy conservation programs for state, local and private electricity users. In it's current form, the bill would allocate over $1 billion to a wide range of programs, including many for local governments, in order to reduce peak electricity demand, enhance low-income energy assistance programs, and encourage energy efficiency.

SBX 6 Burton Consumer Power and Conservation Financing

This bill would create the California Consumer Power and Conservation Financing Authority (CPCFA). The CPCFA will issue up to $5 billion in revenue bonds to accomplish their purposes which include:

1. Build, finance, own, or acquire, either on its own or with others, electric powerplants
2. Provide financial assistance, through programs administered by others, for energy efficient appliance and renewable energy projects
3. Provide financing for energy efficiency and environmental improvements of existing powerplants
4. Develop and implement strategies for ensuring adequate natural gas supplies
5. Achieve an adequate energy reserve capacity in California by 2006.

SBX 28 Sher Powerplant Siting

This bill is now the main Senate energy facility siting bill. Several Republican and Democrat Senators have agreed to consolidate their energy facility siting bills into SB 28X. The bill continues to be amended, but generally it will establish an expedited permitting program for facilities needing air pollution permits, including emission credits. For those facilities for which emission credits are not available, it would establish an air emissions mitigation fee that the generator could pay in lieu of obtaining on offset. The bill would also establish an expedited permitting program within the Energy Commission for repowering of existing facilities and for peaking plants.

SB 28X includes $3 million for the purposes of providing assistance to local governments in reviewing and processing applications for general facilities. This sum is appropriated from the General Fund to the State Energy Resources Conservation and Development Commission and should be useful to local governments who do not have existing staff resources to process permit applications in an expedited manner. Also, as an incentive, local agencies will receive 100% of the additional property tax created from new or repowered energy facilities, including cogeneration and other alternative sources of generation.

SBX 47 Battin Public Utilities

Current law describes a process for determining the price paid by utilities, and their ratepayers, for electricity produced by certain non-utility electricity generators, known as Qualifying Facilities (QFs). That process contains two methodologies for determining the price - one of which relies on prices paid by the Power Exchange (PX) and one of which relies on natural gas prices at the California border. QFs have the one-time choice of switching from the California border methodology to the PX methodology.

CONCLUSION

All indications are that the coming summer months will prove challenging for the City and its residents, both financially, as the costs for electricity and natural gas increase, as well as preparing for potential power outages that may hit our region. The City's efforts to manage costs and reduce demand through energy conservation efforts, retrofits, legislative intervention, incentives and education, will play an important role in minimizing these impacts. The Interim Energy Conservation and Management Program will continue to pursue and develop various

options that will be presented to Council for consideration and adoption, as well as make strides in creating a permanent division to administer these programs.

Respectfully submitted,

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Submitted: Robert A. Epler	Approved: George I. Loveland
Assistant Environmental Services Director	Senior Deputy City Manager

LOVELAND/EPLER/KS

GLOSSARY

Capacity- The capability to produce electrical energy, expressed in watts (W), kilowatts (kW) or megawatts (MW).

CEC - California Energy Commission

Circuit - (SDG&E definition): Transmits electricity from substations to customer's home/business. One circuit serves approximately 3,000 customers.

CPUC - California Public Utilities Commission

Distributed energy (or distributed generation) - Energy supplied by smaller generation plants (usually under 50 megawatts), typically designed to meet the energy needs of a particular facility.

Distribution system - Transporting electric energy through a utility company's high voltage (12,000) and low voltage (240) power lines and related equipment (includes power lines, poles, and transformers). Carries electricity from substation to customer.

Energy audit - The evaluation of how effective a facility is utilizing the energy it is consuming.

Energy component - The component of electrical billing costs which is the consumed commodity.

FERC - Federal Energy Regulatory Commission

Firm Load - Electricity provided to typical residential and business customers (see Non-firm or Interruptible Load).

Grid system - Very high voltage (69,000 and above) transmission lines and related equipment. Carries electricity from source to substations.

Independent System Operator (ISO) - The non-profit organization responsible for scheduling, dispatching and operating the State's electric transmission grid system.

ISO Alert - Declared when forecasted shortfall of operating reserve (i.e. less than 7%) or other marginal operational conditions are anticipated to occur in the **next day**.

ISO Warning - Declared at 2200 hours when similar shortfall of operating reserves (i.e. ISO Alert) is still forecasted for the next day.

kV - Kilovolts (1,000 volts).

kW - Kilowatt (1,000 watts).

kWh - Kilowatt hour. A unit of electrical measurement indicating the consumption or production of 1,000 watts for one hour.

MW - Megawatt (1,000,000 watts).

Mwh - Megawatt hour. A unit of electrical energy measurement indicating the consumption or production of 1,000,000 watts for one hour.

Non-Firm or Interruptible Load - Customers on a special reduced rate that agree to curtail electrical use upon request.

Off-peak - The period during a day with the lowest demand/usage of electricity by customers. Off-peak hours are determined by the billing rate (tariff) applied to different customers and the time of year (Winter or Summer). Off-peak hours are generally considered to be late evening and early morning hours, plus weekends and holidays. Billing rates are lowest for off-peak use.

On-peak - The period during a day with the highest demand/usage of electricity by customers. On-peak hours are determined by the billing rate (tariff) applied to different customers and the time of year (Winter or Summer). On-peak hours are generally considered mid-day during the summer months (usually May 1 - September 30) and early evening hours during winter months (October 1 - April 30). Billing rates are usually highest for on-peak use.

Peak demand - The highest average electrical load over an 15 minute period during a billing period.

Public good - The portion of electric bills the CPUC uses to fund state mandated assistance programs for low-income customers and energy efficiency, renewable energy and energy development programs.

Semi-peak - The period during a day or night with an average demand/usage of electricity by customers. Semi-peak hours are determined by the billing rate (tariff) applied to different customers and the time of year (Winter or Summer). Semi-peak rates are generally lower than on-peak rates, but higher than off-peak rates.

Service Interruptions (rolling blackouts) - Curtailment of firm load (residential and business customers) with one hour rotating circuit outages.

Stage 1 Emergency - Declared at any time it is clear that an Operating Reserve shortfall (i.e. less than 7%) is unavoidable, or is forecast to occur within the next two hours. Requests for voluntary conservation.

Stage 2 Emergency - Declared at any time it is clear that an Operating Reserve shortfall (i.e. less than **5%**) is unavoidable, or is forecast to occur within the next two hours. Requests for Non-firm or interruptible load curtailments.

Stage 3 Emergency - Declared at any time it is clear that a severe Operating Reserve shortfall (i.e. less than **1½ %**) is unavoidable, or is forecast to occur within the next two hours. Requests for firm load curtailments (service interruptions/rolling blackouts).

Standby power - A backup source of power (i.e. a second utility feed or on-site engine driven generator) used to power critical loads when primary source of electrical energy is disrupted.

Wheeling - the use of transmission facilities of one system to transmit energy from a generator to customers on another system by agreement which includes a wheeling charge..

City of San Diego
Electrical Load Curtailment Notification Protocol

Background

Due to the energy supply crisis in the State of California, the City of San Diego needs to establish a clearly defined method to obtain and disseminate timely accurate information to staff responsible for the services delivered by the City's Public Health and Safety Departments. The Emergency Management Section of the Central Operations Division of Fire and Life Safety Services (F&LSS) is the designated point of contact in the City for the distribution of information associated with major emergencies or disasters. In order to facilitate the accurate transfer of information and ensure timely distribution, the F&LSS Communications Center (858-974-9891) has been established as the Emergency Management's 7/24 point of contact for outside agencies.

The procedure below was developed to be consistent with the State mandated Standardized Emergency Management System (SEMS), City of San Diego Emergency Operations Plans (EOP) and departmental operations procedures.

Procedure

2. San Diego Gas & Electric notifies the San Diego County Operation Area/Office of Disaster Preparedness (ODP) Duty Staff Officer with critical information, such as immanent planned power outages.

3. ODP contacts F&LSS Communications Center and requests that the information be passed on to the Duty Emergency Management representative.

4. Duty F&LSS Dispatch Captain or Dispatch Supervisor pages the Emergency Management Director or Coordinator to call dispatch for important information from ODP.

5. Emergency Management representative contacts the Duty Dispatch Captain and discusses appropriate action to be initiated based on the information provided and past practice.

6. Emergency Management will immediately make contact with the City personnel and Dispatch Center listed below, when warranted:

    - P. Lamont Ewell, Assistant City Manager
    - George Loveland, Senior Deputy City Manager
    - Fire Communications Dispatch Captain
    - Metropolitan Wastewater...COMC
    - SDPD Communications Supervisor
    - Water Department
    - Station 38
    - Information Technology and Communications

7. Dispatch Centers/Departments will make notifications and initiate actions based on internal policy and direction from departmental management.

8. Notify mayor and Council Member Offices

D.P. Lee
Revised: January 18, 2001

SDG&E's Priority Notification for Imminent Blackouts

General categories for notification by SDG&E (notified through automated outboard dialing services):

- Health services
- Dental offices
- Pharmacies
- Residential care facilities
- Schools
- Water supply (if not already exempt)
- Railroads
- Transportation
- Security services
- Sewage systems (if not already exempt)
- Veterinary services
- Child/day care services
- Communications services (if not already exempt)
- Manufacturing
- Biotech
- Pipelines
- Public order and safety (if not already exempt)
- Aircraft parts and equipment
- Funeral services and crematories
- Motion picture theaters
- Botanical gardens and zoos

City of San Diego Energy Conservation Measures 1994-2000

Year Completed	Project	Annual Energy Savings (kWh)	SDG&E Program	Incentives ($)	Projected Annual Cost Savings*
1994	Police Southern Division	151,478	STD	$5,875	$12,573
1994	Mira Mesa Library	9,950	STD	$2,915	$826
1994	RB Community Park/Rec Center	184,034	STD	$3,536	$15,275
1994	Police HQ Lighting Retrofit	524,963	PTS	$85,399	$43,572
1994	World Trade Center Lighting Retrofit	452,091	PTS	$42,812	$37,524
1994	Concourse Lighting Retrofit	8,190	PTS	$1,104	$680
1995	Material Test Lab	28,947	STD	$1,608	$2,403
1995	Admin 6th & 7th	119,805	STD	$5,038	$9,944
1995	Central Library	266,784	PTS	$35,000	$22,143
1995	World Trade Center	41,516	CII	$42,812	$3,446
1995	Climax Pump Station	40,712	CII	$1,000	$3,583
1995	Montezuma Pumps	463,622	CII	$25,000	$40,799
1996	Rancho Bernardo Library	52,252	STD	$8,510	$4,337
1996	Tierrasanta Pool	17,010	STD	$1,610	$1,412
1996	Balboa Park Club	9,484	STD	$16,396	$787
1996	Material Test Lab	14,185	STD	$1,097	$1,177
1996	Ridgehaven Court Retrofit	933,446	STD	$21,781	$77,476
1996	Euclid Community Center	19,021	STD	$709	$1,579
1996	Concourse Lighting Retrofit	517,547	PTS	$93,500	$42,956
1996	20th & B Lighting Retrofit	103,601	PTS	$8,937	$8,599
1996	Chollas Ops Lighting Retrofit	353,401	PTS	$26,664	$29,332
1996	Rose Canyon Lighting Retrofit	73,356	PTS	$5,379	$6,255
1996	LED Exit Signs-Buildings Div	197,339	CII	$47,605	$16,379
1996	Stadium LED Exit Signs	10,950	CII	$4,214	$909
1996	Crabtree Building	24,148	PTS	$500	$2,004
1996	Brown Field Lighting Retrofit	21,082	LRP	$1,819	$1,750

Year Completed	Project	Annual Energy Savings (kWh)	SDG&E Program	Incentives ($)	Projected Annual Cost Savings*
1996	Crabtree Building	61,303	PTS	$900	$5,088
1996	Stadium	31,164	CII	$1,875	$2,587
1996	Fire Stations 1&2	344,501	PTS	$25,074	$28,594
1996	Police	18,151	PTS	$2,500	$1,507
1996	Conjunctive Billing-Pump Station #64	57,282	PTS	$440	$5,041
1996	HVAC/Lighting-Metro Ops 2	107,700	PTS	$8,500	$9,478
1996	Bernardo Heights Pump Station	96,205	CII	$1,500	$8,466
1996	Carmel Industrial Pump Station	292,839	CII	$1,750	$25,730
1996	High-Efficiency Motors-Citywide	219,747	MTR	$6,318	$19,338
1996	Balboa Park Fountain	172,390	CII	$3,000	$15,170
1997	High-Efficiency Motors-Citywide	40,519	MTR	$8,113	$3,566
1997	Stadium Expansion	146,121	CNC	$3,767	$12,128
1997	Carmel Valley Library	12,604	CNC	$2,938	$1,046
1997	Chargers Training Facility	136,680	CNC	$17,510	$11,344
1997	Recreation Center	19,867	CNC	$487	$1,649
1997	Scripps/Poway	523,530	CNC	$4,300	$43,453
1997	Police Northern Div Lighting	113,006	PTS	$1,060	$9,379
1997	Police Mid-City Div Lighting	176,734	PTS	$1,485	$14,661
1997	Police Eastern Division Lighting	108,206	PTS	$1,071	$8,981
1997	Police Western Div Lighting	117,892	PTS	$1,024	$9,785
1997	Kearny Mesa Rec Center	18,687	PTS	$204	$1,551
1997	Police Central Division	21,526	PTS	$392	$1,787
1997	Police Eastern Division	110,251	PTS	$969	$9,151
1997	Hilltop Community Center	12,109	CNC	$706	$1,005
1997	Police	185,728	PTS	$2,285	$15,415
1997	Civic Center	50,492	PTS	$1,350	$4,191
1997	Convert Red Signal Lights to LED	7,134,528	CII	$153,630	$499,417
1997	North City Water Reclamation Plant Design Efficiencies	17,779,615	CNC	$661,792	$1,564,606
1997	Metro Biosolids Ctr Design Efficiencies	1,891,098	CNC	$43,880	$166,417
1997	Water Quality Lab	600,457	CNC	$0	52,848

Year Completed	Project	Annual Energy Savings (kWh)	SDG&E Program	Incentives ($)	Projected Annual Cost Savings*
1997	Scripps Miramar Pump Station	106,700	CNC	$1,200	$9,390
1997	Catalina Pump Station	270,000	CII	$3,000	$23,760
1997	S. Creek Pump Station	40,408	CII	$500	$3,556
1997	Penasquitos Pump Station	2,184,693	CNC	$15,500	$192,253
1997	Herrick Pump Station	600,098	CII	$7,000	$52,809
1997	Metro Waste Water	3,931	CII	$1,335	$346
1997	Miramar Filter Plant	106,213	PTS	$1,100	$9,347
1997	Alvarado Filter Plant	118,132	PTS	$858	$10,396
1997	Otay Filtration Plant	128,588	PTS	$530	$11,316
1997	Civic Theater	71,247	PTS	$2,655	$5,914
Total Savings		**38,869,856**		**$1,483,318**	**$3,260,186**

*Cost savings based on $0.083-$0.088 per kWh, .$0.07/kWh for signal lights

LEGEND:

CLR, PTS = Commercial Lighting Retrofit, Power To Save (primarily Lighting Jobs, may be some mechanical)

NCL, CNC, STD = New Construction Lighting, Commercial New Construction (mechanical) & Savings Through Design (lighting or mechanical)

CII = Commercial/Industrial Incentives; usually mechanical, can be custom lighting

LRP, MTR = Lighting Rebate Program, Motors Rebate Program

MASTER ENERGY EFFICIENCY SERVICES AGREEMENT PHASE ONE PROJECTS 1999 - 2000				
Project Name	**Description**	**Cost**	**Annual Savings Electricity**	**Annual Savings Natural Gas**
World Trade Center	Retrofit heating, cooling, EMS	$426,300	416,850 kWh	19,245 therms
Central Library	Retrofit heating, cooling, pumps, EMS	$603,100	881,200 kWh	16,784 therms
Sewer Pump Station # 2	Retrofit lighting, ventilation	$131,100	344,300 kWh	n/a
Crabtree Bldg	Retrofit lighting	$31,850	77,650 kWh	n/a
Total		**$1,192,350**	**1,720,000**	**36,029**

Existing City Conservation Efforts

Following are existing energy conservation measures that have been implemented by City departments. This is not a complete list of all efforts, but provides highlights of those efforts.

- Reduced overhead lighting (disconnecting every third light, for example)
- Placed all HVAC and lighting systems on timers
- Lowered thermostats
- Turned off lights, computers and other equipment when not in use
- Installed energy management systems during retrofits
- Restricted use of personal electrical devices by employees

Examples of conservation efforts unique to specific departments include:

- Transportation: Replaced red traffic bulbs with LED lamps, saving 7.1 million kWh and $500,000 per year. They are currently converting 16,071 green traffic signal bulbs to LED lamps to further reduce demand by an additional 577 kW, or 5 million kWh per year (a reduction of 2.4% in the City's load). Cost savings are estimated at $500,000 per year. The department also manages and encourages employee transportation alternatives.

- Water: Installed variable speed drives , reduced pump motor size and operated generators during peak demand periods during Stage 3 alerts.

- Metropolitan Wastewater: Developed an internal Energy Committee to review and implement conservation measures; developed a department Energy Management Plan, converted lights to energy efficient models, and developed a monthly energy use report for tracking and energy management purposes.

- General Services: Manages contract with On-Site Energy (an energy service company) to retrofit City facilities to become more energy efficient. Currently, four projects are underway, with projected annual savings of 2.6 million kWh and 36,000 therms. Overall cost for these projects is estimated at $2.4 million. Projected dollar savings have not been determined due to the uncertainty in electric rates.

- Economic Development: Provides conservation information to businesses; developing a strategy for new developments.

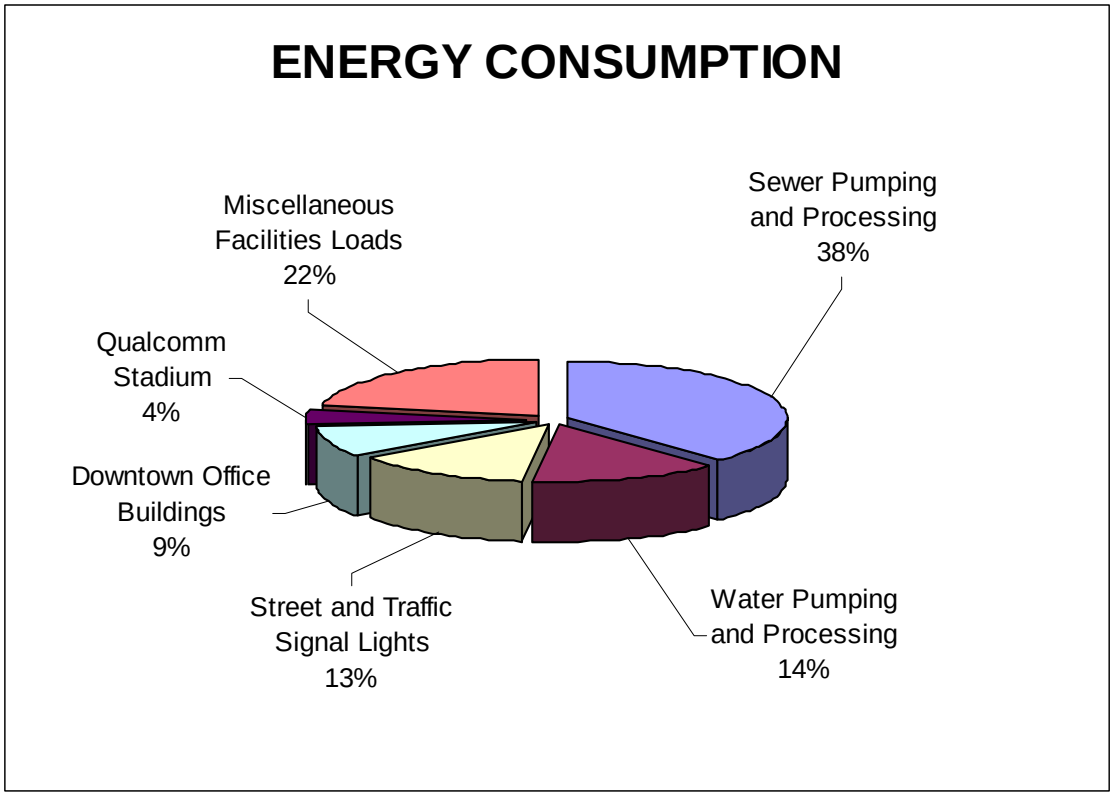
- Planning: Encourages mixed use and transit oriented development; provides information on SDG&E energy conservation programs to developers.

- Police: Developed energy conservation policies and procedures for facilities; reducing lighting in garages.

- Fire: Dual glazing on windows; utilizes solar heating for hot water heaters at some stations; increases insulation as part of all re-roofing projects.

- Environmental Services: Implemented Green Building standards in both Ridgehaven and Miramar Place facilities, reducing energy use by 60%; reducing outdoor lighting; using alternative fuels.

City Energy Consumption by User Type



Highlights of San Diego Climate Wise Partners
Energy Conservation Efforts

There are fifteen San Diego Climate Wise Partners that have achieved significant results by implementing their specific Action Plans. These plans include use of new technologies and conservation practices. Successful practices include energy savings through lighting retrofits, use of high-efficiency heating and air conditioning equipment, and compressed air audits; fuel savings realized through subsidized trolley passes and carpooling incentives; and waste reduction through recycling programs. Following is a summary of five companies' accomplishments:

Hewlett-Packard San Diego has 15 projects underway that will save approximately 4.9 million kWh annually when completed. The company has a full-time Energy Manager who oversees projects and constantly looks for new ways to save the company energy and money.

ST Microelectronics, the local subsidiary of a global electronics firm, has made a strong commitment to the environment that begins with the CEO and extends throughout the company structure. The company has projects underway projected to save 3.3 million kWh annually when completed.

San Diego State University provides much of its own power with a cogeneration plant that is currently being expanded to provide energy independence and to meet all of the campus' power needs. Energy efficiency projects underway, including sensors for vending machines and lighting controls, are projected to save approximately 750,000 kWh per year when completed.

Solar Turbines has a successful employee education program, the Grassroots Energy Conservation Initiative, which has saved 4.5 million kWh since its inception in 1998 with little capital investment

Qualcomm has a full-time energy manager and is currently pursuing projects that will save approximately 8 million kWhr per year. The company is investigating alternative sources of energy such as micro-cogeneration and photovoltaics to reduce its energy purchases from the grid.